

**SECTION 02 65 00**  
**UNDERGROUND STORAGE TANK REMOVAL**

**PART 1 - GENERAL**

**1.1 DESCRIPTION:**

- A. Underground Fuel Tank Liquid Removal:
  - 1. Material (Liquid) Testing.
  - 2. Removals and Disposal.
  - 3. Certification of Contents and Disposal.
- B. Underground Fuel Tank Cleaning and Disposal:
  - 1. Excavation of Tank.
  - 2. Removals and Disposal.
  - 3. Evacuation of Combustible Vapors.
  - 4. Tank Cleaning.
  - 5. Disassembling of Tank.
  - 6. Certification for Proper Disposal of Tank.
- C. Contamination Assessment:
  - 1. Soil Testing.
  - 2. Contaminated Soil Disposal
  - 3. Certification for Proper Disposal of Contaminated Soil.
- D. Report:
  - 1. Written report describing in detail the procedures used to remove the liquid from the underground storage tank, cleaning and removing of the underground storage tank, and disposal of the liquid residues.
  - 2. Photographic documentation of the work, including lab and field results, and receipts from the proper authority for the tank and residue disposal.

**1.2 RELATED WORK:**

- A. Section 01 45 29, TESTING LABORATORY SERVICES
- B. Section 02 41 00, DEMOLITION
- C. Section 31 20 11, EARTH MOVING
- D. Section 23 05 11, COMMON WORK RESULTS FOR HVAC AND STEAM GENERATION

**1.3 QUALITY ASSURANCE:**

- A. Underground fuel tank removal and disposal shall comply with the following:
  - 1. United States Environmental Protection Agency (EPA), 40 CFR Part 280 and Part 281.

2. United States Environmental Protection Agency (EPA), Test Methods for Petroleum Hydrocarbons, SW-846 Method 8015.
3. The requirements of California Health and Safety Code Division 20, Chapter 6.7, Section 25298, California Code of Regulations Title 23, Division 3, Chapter 16, Sections 2670 through 2672, and the Los Angeles County Code.
4. OSHA Standards 29 CFR Part 1910 and 1926.1128.
5. Contractors removing underground storage tanks must be licensed by the California Contractors State License Board and possess the Hazardous Substance Removal Certification (HAZ)
6. All test results shall be on the letterhead of a California Department of Public Health Environmental Laboratory Accreditation Program (ELAP) approved laboratory and shall contain the analysis date, method of extraction, methods of analysis, results, and QA/QC

#### **1.4 SUBMITTAL:**

- A. Furnished detailed CADD generated submittals including:
  1. Detailed plan view
  2. Piping removal diagrams
  3. Control removal diagrams
  4. Component diagrams including tank removal procedure
  5. Detailed sequence of procedure
  6. Hazardous material plan for local VA management.
  7. Permits/clearance for closure must be obtained from the Los Angeles County Fire Department or local fire department (Los Angeles City), and the South Coast AQMD (rules 1149 and 1166).

#### **1.5 APPLICABLE PUBLICATIONS:**

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Petroleum Institute (API):  
1604-96(R2010).....Closure of Underground Petroleum Storage Tanks
- C. American Society of Testing Materials (ASTM):  
E1739-95(R2010).....Guide to Risk-Based Corrective Action (RBCA) Applied at Petroleum Release Sites  
E1912-98(R2004).....Guide for Accelerated Site Characterization for Confirmed or Suspected Petroleum Releases

- E1943-98(2010).....Guide for Remediation of Ground water by  
Natural Attenuation at Petroleum Release  
Sites
- D. National Fire Protection Agency (NFPA):
- 30-08.....Flammable and Liquid Combustible Code
- 70B-10.....Recommended Practice for Electrical  
Equipment Maintenance
- 326-10.....Standard for Safeguarding of Tanks and  
Containers for Entry, Cleaning, or Repair
- 329-10.....Recommended Practice for Handling Release  
of Flammable Liquids and Gases

#### **1.6 PROJECT SITE CONDITIONS:**

Do not close or obstruct streets, sidewalks or drives without  
permission and approval of the VA.

#### **PART 2 - PRODUCTS (NOT USED)**

#### **PART 3 - EXECUTION**

##### **3.1 GENERAL:**

- A. Remove underground storage tank, liquid, and associated work,  
including soil removal as specified and indicated on the drawings.
- B. Restore the excavated area with new materials as specified to  
match adjacent (existing) surfaces.
- C. Procure all required permits required by the local jurisdiction  
(City, County and State) for removal and disposal of tank, liquid  
contents, and contaminated soils. Permit costs to be borne by  
Contractor.

##### **3.2 UNDERGROUND STORAGE TANK LIQUID REMOVAL:**

- A. Provide samples of liquids from the underground fuel storage tank  
to a qualified state certified hazardous waste testing facility  
for laboratory analysis and approval for the liquid disposal and  
disposal location.
- B. Remove the liquid from the tank for disposal prior to removing the  
tank from the ground.
- C. Provide documentation of the liquid removal and its disposal in a  
final report to the VA.

##### **3.3 UNDERGROUND STORAGE TANK CLEANING AND DISPOSAL:**

- A. Tank shall be reviewed and certified clean by local Fire Marshal.
- B. Remove the tank from the ground, place it on the ground adjacent  
to removal location, and secure it prior to cleaning.

- C. Measure levels of combustible vapors and oxygen, and initiate ventilation of the tank, if needed:
  - 1. Ventilate tank using a small gas exhauster until the vapor concentration is reduced to 10 percent or less of the lower explosive limit.
  - 2. Oxygen content shall range from 19.5 to 23.5 percent.
  - 3. Cut access ports for cleaning into tank after vapor and oxygen concentrations have met the requirements noted above.
- D. Cleaning of the tank shall include mopping, scraping, and sweeping the interior of the tank.
- E. Collect, contain and place residuals in a United States Department of Transportation (DOT) approved type 17H, 200 L (55 gallon) capacity drum, for transporting and disposal.
- F. Ensure final vapor and oxygen concentration are within the requirements noted above before proceeding to cut and dismantle the tank for its disposal.
- G. Remove dismantled tank to an approved disposal facility.
- H. Obtain disposal facility receipts noting proper tank disposal.

**3.4 REMOVED TANK AREA ASSESSMENT:**

- A. Collect five soil samples from the removed underground storage tank area. Take one sample from each of the sidewalls, and one sample from the base. Containerize the samples in glass sample jar(s), seal with Teflon-coated lids, and place the jar on ice. Deliver samples with completed chain-of-custody documentation to the laboratory. Laboratory shall analyze each sample for Total Petroleum Hydrocarbon (TPH) concentrations using a modified EPA method 8015.
- B. For USTs containing petroleum, soil sampling analysis must meet at a minimum the California Regional Water Quality Control Board - Los Angeles Region requirements of September 2006
- C. Site Restoration: See Section 31 20 11, EARTH MOVING.

**3.5 CONTAMINATED SOIL:**

- A. When soil assessments reveal evidence of leakage or spillage of hydrocarbons at levels above those established by the state department of environmental management for underground storage tank closures (100 parts per million), collect additional soil samples beyond the boundaries of the original tank location (Tank boundary is defined as tank enclosure in a right angle that touches the circumference of the tank). Any volume difference between the tank and the enclosure shall not to exceed 100 cubic

yards of soil removed. Any work beyond this boundary shall be considered extra and shall be based on unit pricing.

- B. Continue the soil contamination assessment testing around the tank until the contamination level is within acceptable level, less than 100 parts per million.
- C. Remove all contaminated soil from the site and haul it to an approved sanitary landfill for proper disposal.

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